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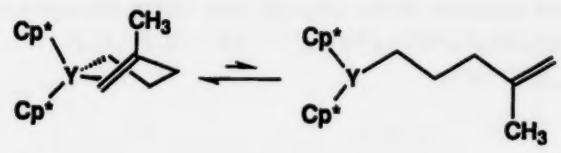
Contents

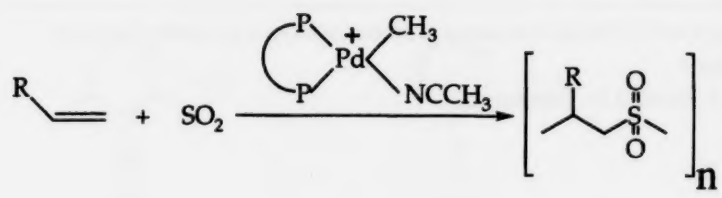
Preface 1

Preliminary Communications

Coordination of a disubstituted alkene in a chelated d^0-metal–alkyl–alkene complex. Evidence for equilibrium between complexes with coordinated and free alkenes 5
C.P. Casey, J.J. Fisher

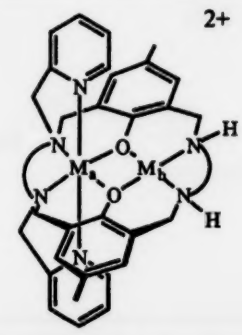


Palladium(II)-catalyzed alternating copolymerization of alkenes with sulfur dioxide 8
L.M. Wojcinski II, M.T. Boyer, A. Sen

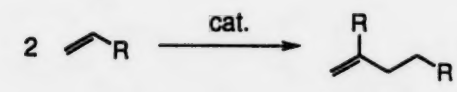


Articles

Cooperative bimetallic reactivity 13
D.G. McCollum, B. Bosnich

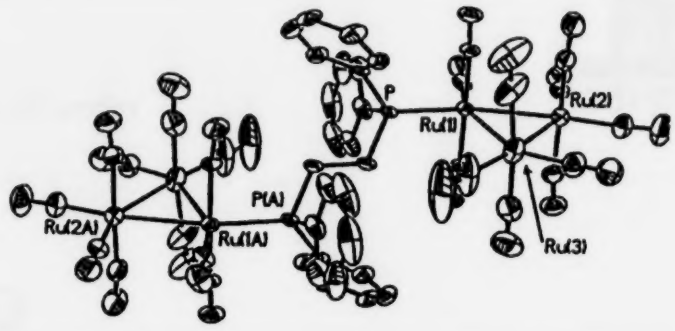
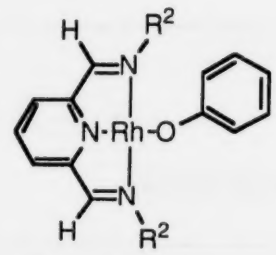
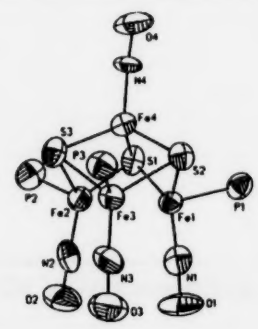
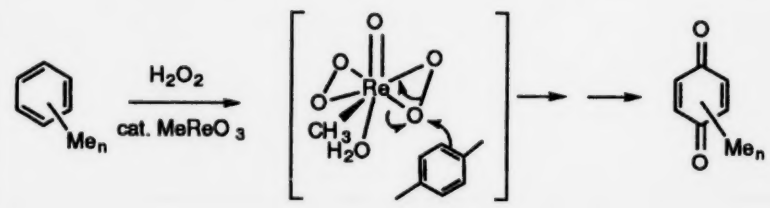
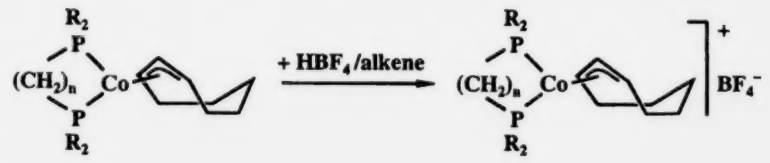
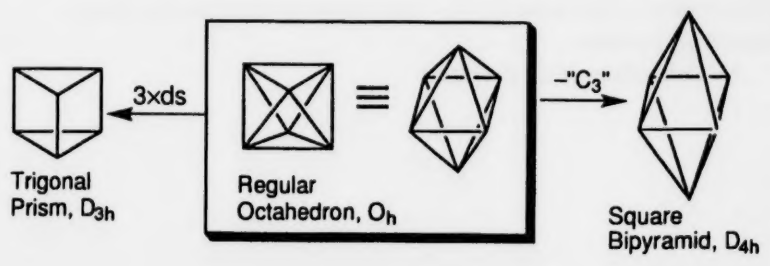


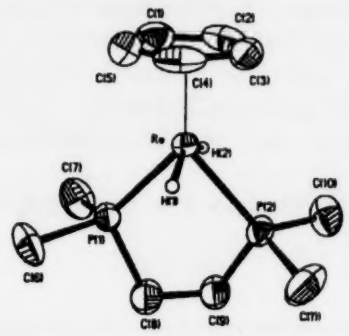
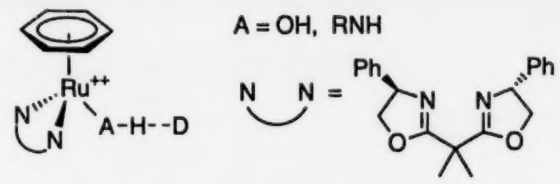
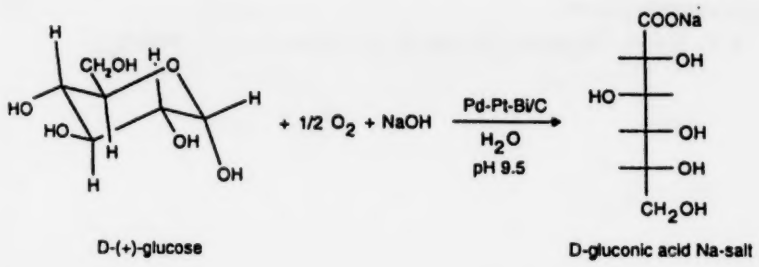
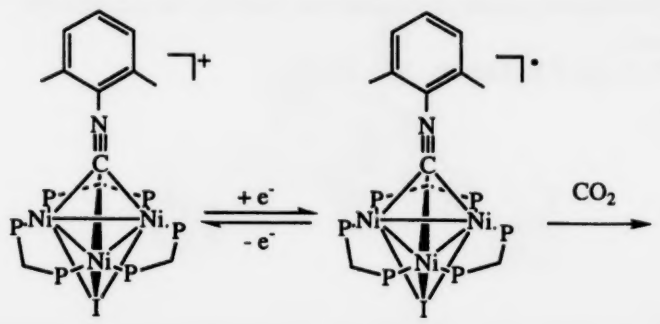
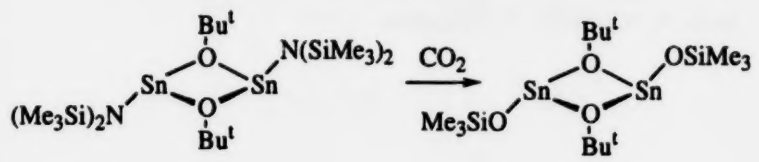
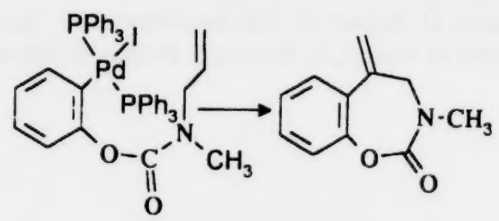
Zirconocene–alumoxane (1:1) — a catalyst for the selective dimerization of α-olefins 20
J. Christoffers, R.G. Bergman



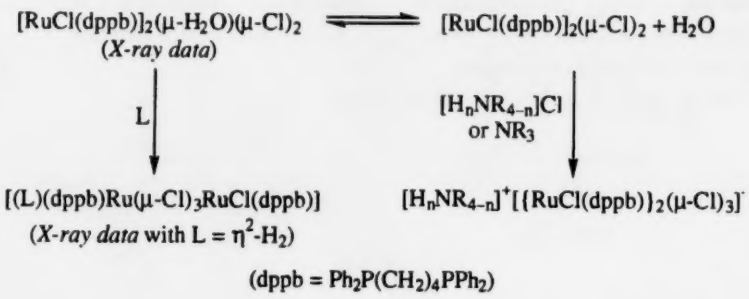
cat.: Cp_2ZrCl_2 / MAO (1 : 1), 0.1 - 1 mol%

Elsevier Science S.A.

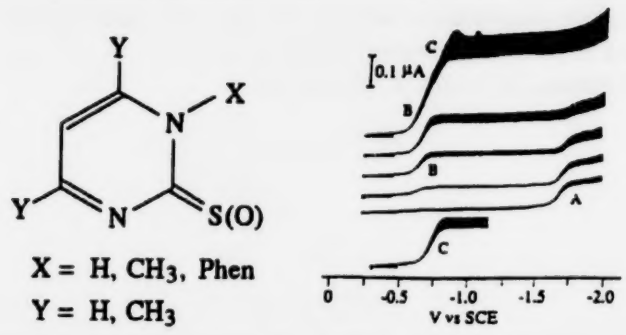
Ligand connected metal clusters. The molecular structures and solid state packing of $\{Ru_3(CO)_{11}\}_2$bis(diphenylphosphino)ethane and $\{Ru_3(CO)_{11}\}_2$(1,4-bis(diphenylphosphino)benzene..... P.M. Van Calcar, M.M. Olmstead, A.L. Balch	28	
Rhodium aryloxide complexes containing terdentate nitrogen ligands, C–O bond formation, hydrogen bonding with phenol and oxidative addition reactions. Molecular structure of an Rh(III)–acetyl complex ..... H.F. Haarman, J.-W.F. Kaagman, W.J.J. Smeets, A.L. Spek, K. Vrieze	34	 R^2 = *i*-Pr or *t*-Bu
Synthesis and structures of the cuboidal iron–sulfur–nitrosyl–phosphine clusters $[Fe_4S_3(NO)_4(PR_3)_3]^{0,1+}$ (R = Et, Pr^i, C_6H_{11}) ..... C. Goh, R.H. Holm	46	 $[Fe_4S_3(NO)_4(PEt_3)_3]$
Selective C–H bond activation of arenes catalyzed by methylrhenium trioxide..... J. Jacob, J.H. Espenson	55	
η^3-Allyl–cobalt(II) complexes..... G. Großheimann, P.W. Jolly	60	
Chemical applications of topology and group theory 30. Distortions from idealized symmetrical coordination polyhedra by lifting molecular orbital degeneracies..... R.B. King	68	

Thermal and photochemical substitution reactions of $CpRe(PPh_3)_2H_2$ and $CpRe(PPh_3)H_4$. Catalytic insertion of ethylene into the C–H bond of benzene ..... W.D. Jones, J.A. Maguire, G.P. Rosini	77	
Second sphere coordination behavior of aquo and amine ligands bound to a η^6-benzeneruthenium(II) cation ..... H. Kurosawa, H. Asano, Y. Miyaki	87	
Selective oxidation of glucose on bismuth-promoted Pd–Pt/C catalysts prepared from $NOct_4Cl$-stabilized Pd–Pt colloids ..... H. Bönnemann, W. Brijoux, R. Brinkmann, A. Schulze Tilling, T. Schilling, B. Tesche, K. Seevogel, R. Franke, J. Hormes, G. Köhl, J. Pollmann, J. Rothe, W. Vogel	95	
Infrared spectroelectrochemical and electrochemical kinetics studies of the reaction of nickel cluster radicals $[Ni_3(\mu_2\text{-dppm})_3(\mu_3\text{-L})(\mu_3\text{-I})]\cdot$ (L = CNR, R = CH_3, i-C_3H_7, C_6H_{11}, $CH_2C_6H_5$, t-C_4H_9, 2,6-$Me_2C_6H_3$; L = CO) with carbon dioxide ..... R.E. Wittrig, G.M. Ferrence, J. Washington, C.P. Kubiak	111	
Mechanistic details for metathetical exchange between XCO (X = O and RN) and the tin(II) dimer, $\{Sn[N(SiMe_3)_2](\mu\text{-OBu}^t)\}_2$..... R. Xi, L.R. Sita	118	
Palladium-catalyzed seven-membered N,O-heterocycle ring formation..... G. Bocelli, M. Catellani, G.P. Chiusoli, F. Cugini, B. Lasagni, M.N. Mari	123	

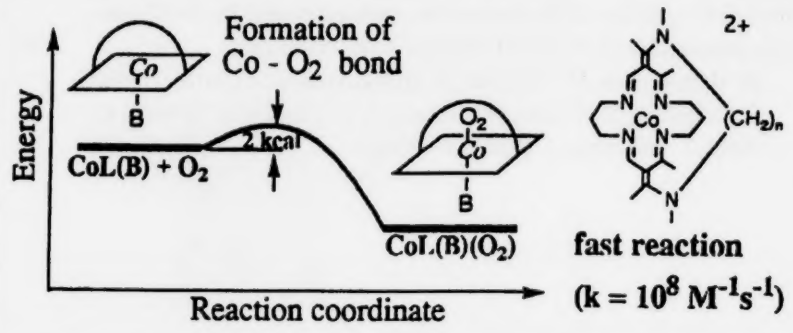
Triply-bridged diruthenium(II) 1,4-bis(diphenylphosphino)butane (dppb) and (*R*)-2,2′-bis(diphenylphosphino)-1,1′-binaphthyl (binap) complexes, including structural characterization of [(dppb)ClRu(μ-D_2O)(μ-Cl)$_2$RuCl(dppb)], [(η^2-H_2)(dppb)-Ru(μ-Cl)$_3$RuCl(dppb)] and the [(dppb)ClRu(μ-Cl)$_3$RuCl-(dppb)]$^-$ anion 130
K.S. MacFarlane, I.S. Thorburn, P.W. Cyr, D.E.K.-Y. Chau, S.J. Rettig, B.R. James



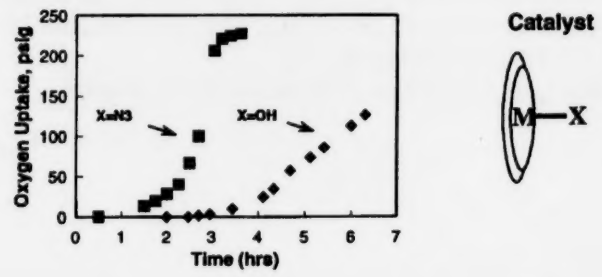
Electrochemistry of 2-thio- and 2-oxo-pyrimidines in dimethyl formamide in the presence of dioxygen 145
C. Tavagnacco, S. Peressini, G. Costa, M. Borsari, R. Battistuzzi



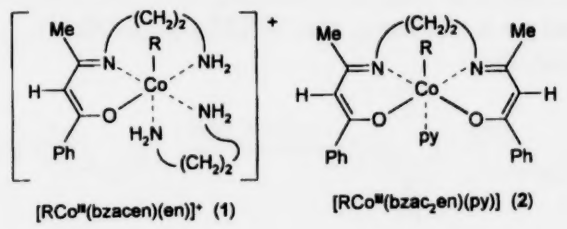
The dynamics of formation of the O_2–Co^{II} bond in the cobalt(II) cyclidene complexes..... 151
E.V. Rybak-Akimova, K. Marek, M. Masarwa, D.H. Busch



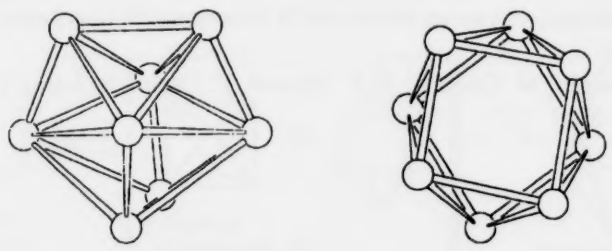
Azide promotion of alkane oxidations catalyzed by metal complexes in solution..... 162
J.E. Lyons, P.E. Ellis, Jr., S.N. Shaikh

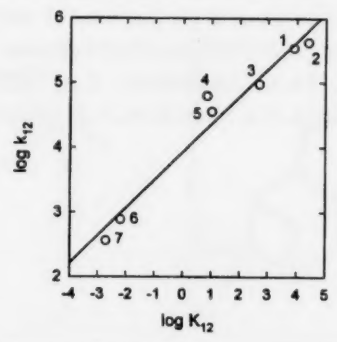
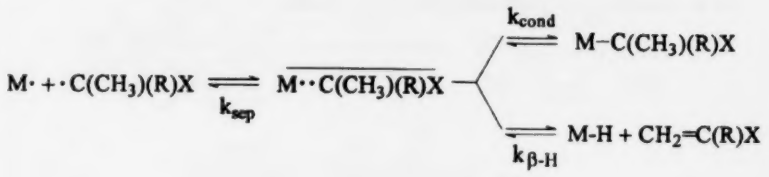
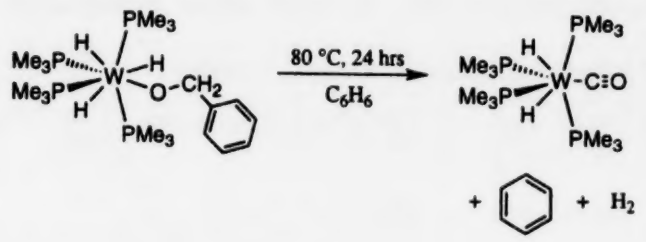
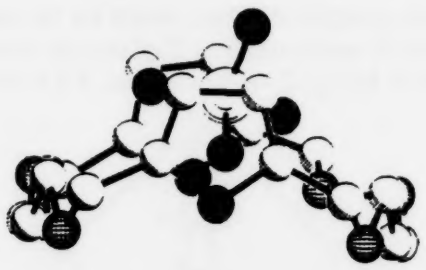
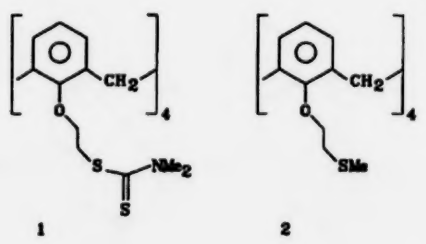


Alkylcobalt chelates with Schiff bases derived from a β-diketone bearing both alkyl and aryl groups 169
I. Levitin, M. Tsikalova, N. Sazikova, V. Bakhmutov, Z. Starikova, A. Yanovsky, Y. Struchkov

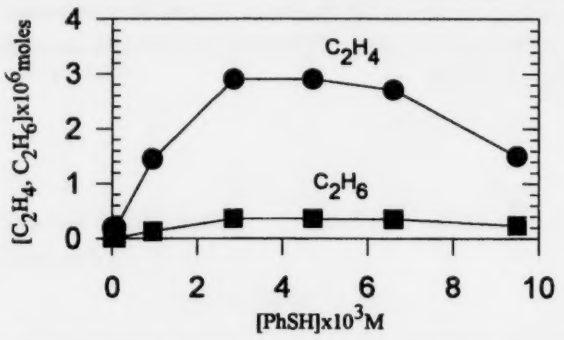


Eight-coordinate chelate complexes of zirconium(IV) and niobium(IV): X-ray diffractometric and EPR investigations 177
F. Calderazzo, U. Englert, C. Maichle-Mössmer, F. Marchetti, G. Pampaloni, D. Petroni, C. Pinzino, J. Strähle, G. Tripepi

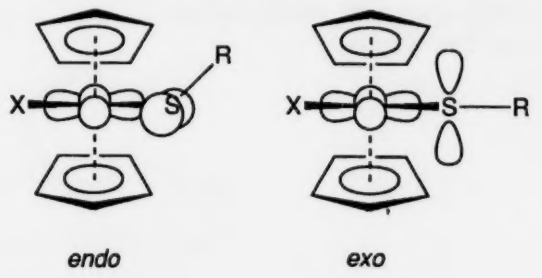


Kinetics and mechanism of the oxidation of ammineruthenium(II) complexes by bromine..... 189 S. Plotkin, A. Haim	
Rate constants and activation parameters for organo–cobalt porphyrin bond homolysis from NMR relaxation times ..... 197 D.C. Woska, B.B. Wayland	
Elimination of benzene from a benzyloxy ligand to form a carbonyl group on a tungsten-phosphine center..... 202 T.J. Crevier, J.M. Mayer	
Interaction of mono- and triphosphate anions with a protonated polyaza macrocycle and its Cu(II) complexes ..... 207 Q. Lu, J.H. Reibenspies, R.I. Carroll, A.E. Martell, A. Clearfiled	
Electronic absorption spectroscopy for the investigation of the solution binding of gold, palladium, mercury and silver salts to the lower rim substituted calix[4]arenes 25,26,27,28-(2-*N*,*N*-dimethyldithiocarbamoylethoxy)calix[4]arene and 25,26,27,28-(2-methylthioethoxy)calix[4]arene ..... 216 A.T. Yordanov, D.M. Roundhill	

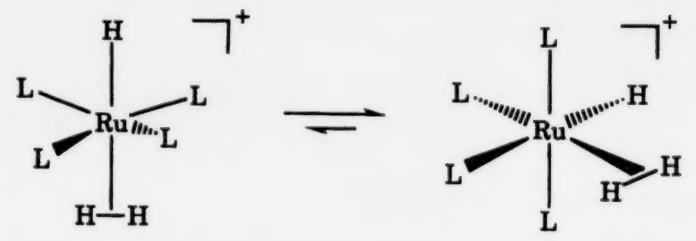
Catalytic reduction of acetylene in the presence of molybdenum and iron clusters, including FeMo cofactor of nitrogenase 221
T.A. Bazhenova, M.A. Bazhenova, S.A. Mironova, G.N. Petrova, A.K. Shilova, N.I. Shuvalova, A.E. Shilov



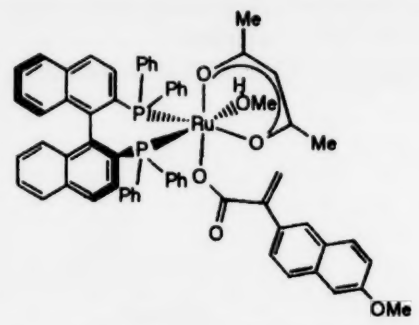
Misdirected π-donor ligands: $(\eta^5\text{-}C_5H_5)_2Zr(Cl)(SR)$ with sterically more demanding R groups have lower rotational barriers..... 227
M.T. Ashby, S.S. Alguindigue, M.A. Khan



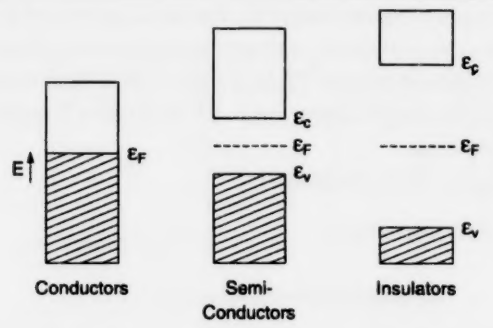
Solution and crystal structure of the dihydrogen complex $[Ru(H_2)(H)(PMe_2Ph)_4]PF_6$, an active alkyne hydrogenation catalyst..... 238
A.J. Lough, R.H. Morris, L. Ricciuto, T. Schleis



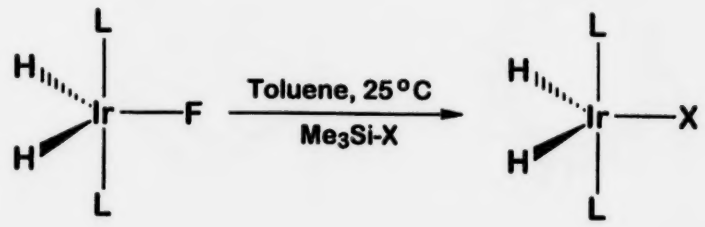
Synthesis, characterization and application of Ru(BINAP)(Acac)-(MNAA)(MeOH), a highly effective catalyst for the asymmetric hydrogenation of 2-(6′-methoxynaphth-2′-yl)acrylic acid 247
C.-C. Chen, T.-T. Huang, C.-W. Lin, R. Cao, A.S.C. Chan, W.T. Wong



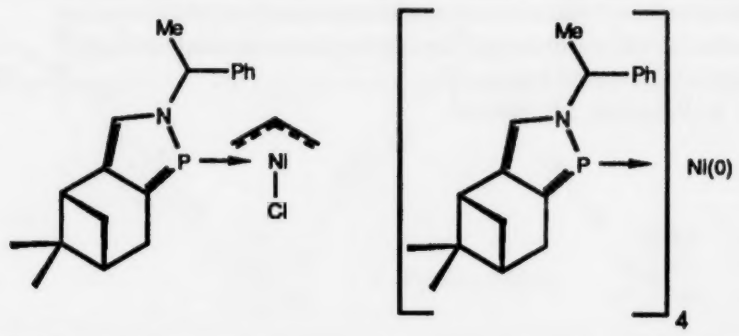
Electronic properties of some inorganic solids 252
R.G. Pearson



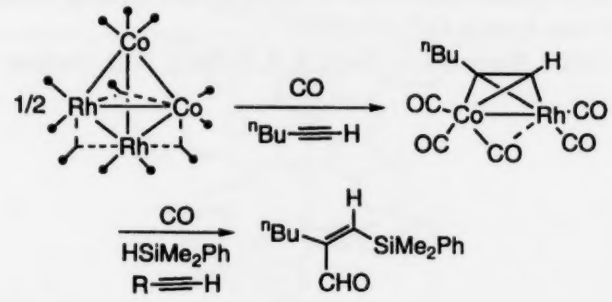
Silyl reagents (Me_3Si–X) efficiently transfer X to $Ir(H)_2F(P^tBu_2Ph)_2$ 261
A.C. Cooper, J.C. Huffman, K.G. Caulton



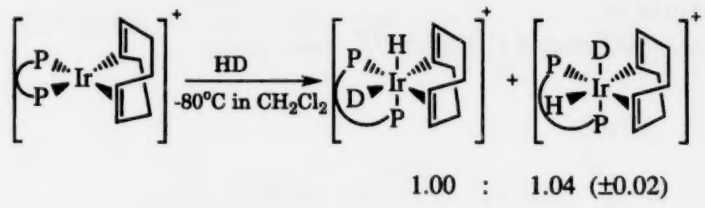
Transition metal complexes
IX. Nickel complexes with a chiral azaphosphole ligand 273
K. Angermund, A. Eckerle, J. Monkiewicz, C. Krüger, G. Wilke



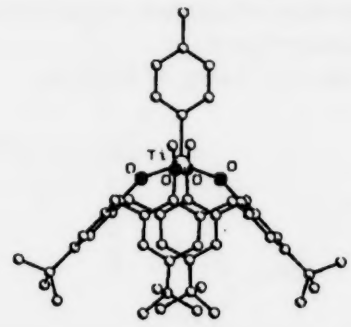
On the mechanism of silylformylation catalyzed by Rh–Co mixed metal complexes 279
I. Ojima, Z. Li, R.J. Donovan, P. Ingallina



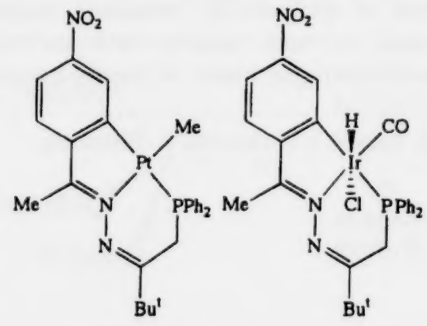
Probing the nature of H_2 activation in catalytic asymmetric hydrogenation 285
C.R. Landis, T.W. Brauch



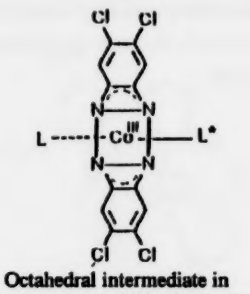
Titanium–carbon functionalities on an oxo surface defined by a calix[4]arene moiety and its redox chemistry 298
A. Zanotti-Gerosa, E. Solari, L. Giannini, C. Floriani, N. Re, A. Chiesi-Villa, C. Rizzoli



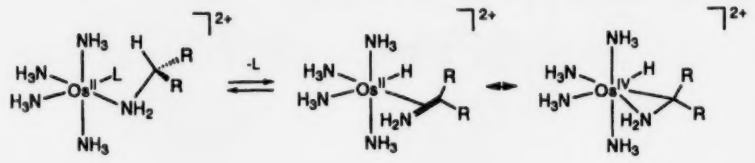
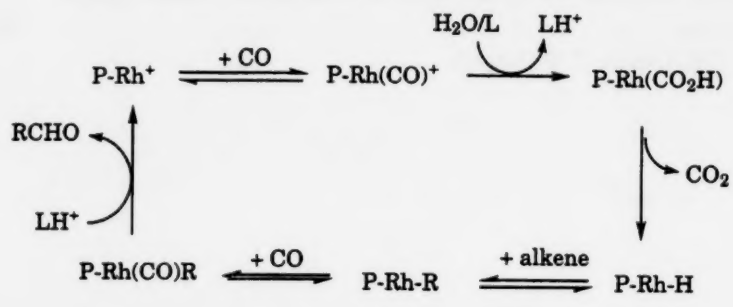
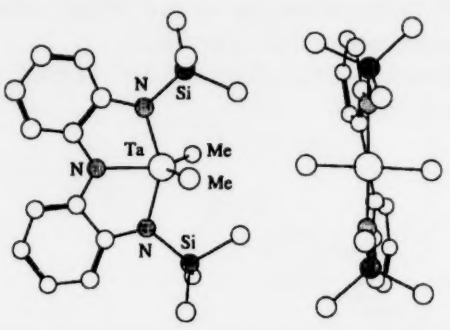
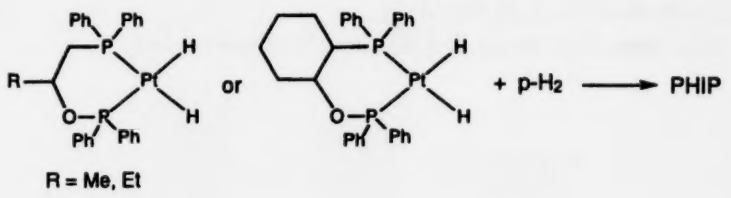
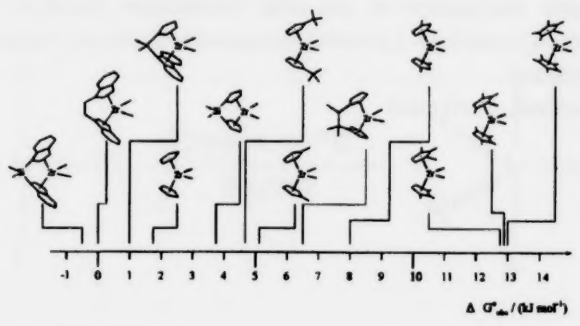
Chemistry of the azine phosphine ligand *Z,E*-$PPh_2CH_2C(Bu^t)$=N–N=$CMe(C_6H_4NO_2$-4): crystal structure of $[Mo(CO)_4\{PPh_2CH_2C(Bu^t)$=N–N=$CMe(C_6H_4NO_2$-4)$\}]$ 312
B.L. Shaw, S.D. Perera, D.J. Shenton, M. Thornton-Pett

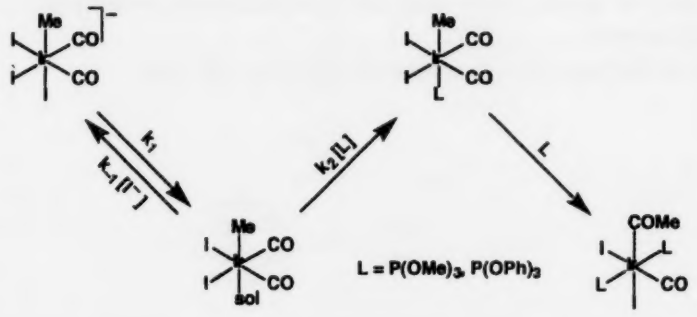
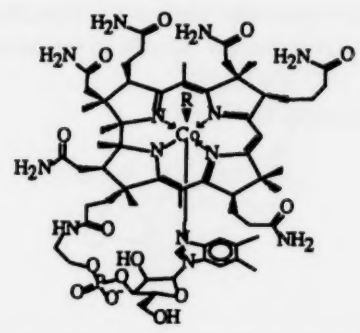
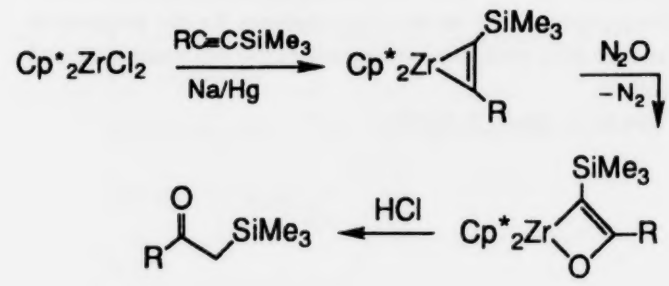
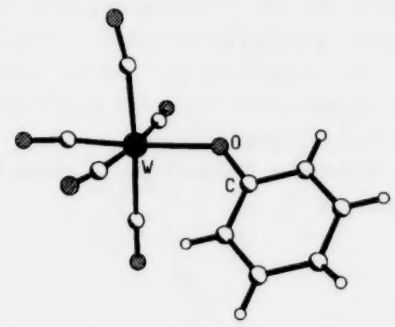
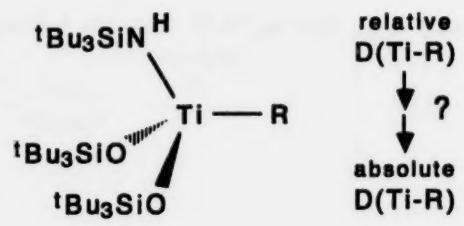
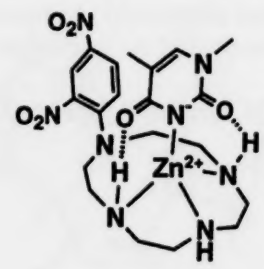


Kinetics and mechanism of the axial substitution reactions of (ligand)bis(4,5-dichloro-1,2-benzosemiquinonediiminato)cobalt-(III) complexes 326
L.I. Simándi, S. Németh

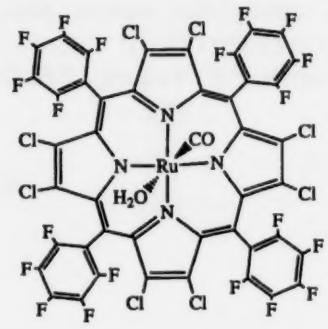


Octahedral intermediate in square-pyramidal substitution

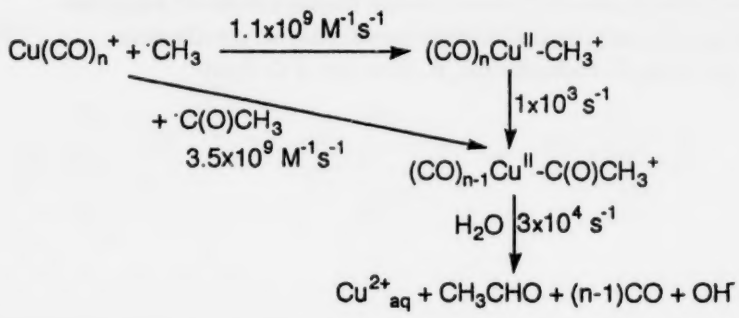
The influence of the catalyst preparation protocol and silane structure on the rate and enantioselectivity of ansa-titanocene catalysed hydrosilation of prochiral ketones ..... 330 K. Rahimian, J.F. Harrod	
Reversible β-hydride elimination of amine ligands forming stable *cis*-η^2-iminium hydride Os^{II} complexes ..... 337 S.D. Orth, J. Barrera, S.M. Rowe, L.E. Helberg, W.D. Harman	
The hydrogenation and hydroformylation of alkenes as catalyzed by polymer-anchored rhodium trichloride under water gas shift reaction conditions ..... 345 M.M. Mdleleni, R.G. Rinker, P.C. Ford	
The synthesis and structures of tantalum complexes that contain a triamido or a diamidoamine ligand ..... 353 R.R. Schrock, J. Lee, L.-C. Liang, W.M. Davis	
Hydride complexes of platinum(II) containing unsymmetrical di(phosphine) ligands: synthesis, characterization and evidence for pairwise addition of hydrogen based on parahydrogen induced polarization ..... 363 S.P. Millar, M. Jang, R.J. Lachicotte, R. Eisenberg	
Alkyl exchange between aluminum trialkyls and zirconocene dichloride complexes — a measure of electron densities at the Zr center .. 376 S. Beck, H.H. Brintzinger	

Model reactions of a carbonylation catalyst: phosphite induced migratory CO insertion in $[MeIr(CO)_2I_3]^-$ ..... A. Haynes, J.M. Pearson, P.W. Vickers, J.P.H. Charmant, P.M. Maitlis 382	
Co–C force constants from resonance Raman spectra of alkylcobalamins: insensitivity to dimethylbenzylimidazole coordination..... S. Dong, R. Padmakumar, R. Banerjee, T.G. Spiro 392	
Preparation of trimethylsilyl alkyne complexes of bis(pentamethylcyclopentadienyl)zirconium, $(\eta^5\text{-}C_5Me_5)_2Zr(RC{\equiv}CSiMe_3)$, and their regioselective reactions with nitrous oxide ..... A.K. List, K. Koo, A.L. Rheingold, G.L. Hillhouse 399	
The propensity of alkoxide and aryloxide derivatives of tungsten carbonyls to aggregate in solution. Synthesis and X-ray structures of dinuclear, trinuclear and tetranuclear complexes derived from the $MeOW(CO)_5^-$ anion ..... D.J. Darensbourg, K.K. Klausmeyer, J.D. Draper, J.A. Chojnacki, J.H. Reibenspies 405	
Extracting absolute titanium–alkyl and –hydride bond enthalpies from relative $D(TiR(H))$ in $(silox)_2(^tBu_3SiNH)TiR$: electronegativity and *ECT* models..... J.L. Bennett, T.P. Vaid, P.T. Wolczanski 414	
A new macrocyclic tetraamine, 2,4-dinitrophenylcyclen (= 1-(2,4-dinitrophenyl)-1,4,7,10-tetraazacyclododecane): synthesis, cation reporter properties, and recognition of 1-methylthymine by its zinc(II) complex ..... T. Koike, T. Gotoh, S. Aoki, E. Kimura, M. Shiro 424	

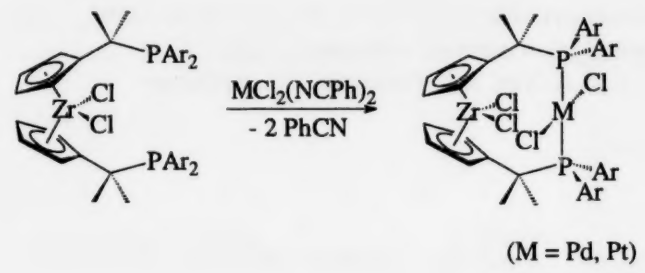
Catalysis of aerobic olefin oxidation by a ruthenium perhaloporphyrin complex 433
E.R. Birnbaum, J.A. Labinger, J.E. Bercaw, H.B. Gray



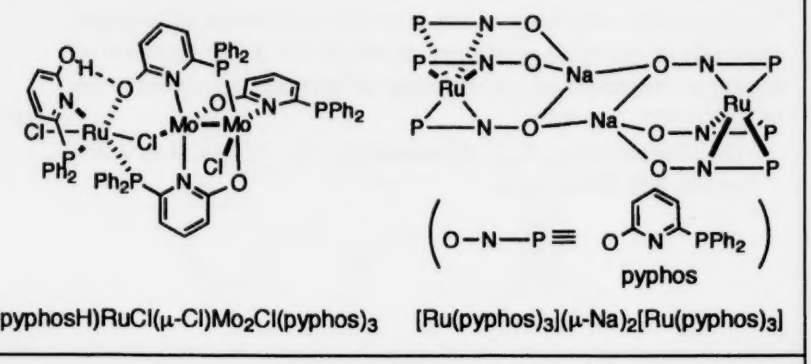
Monovalent copper as a potential catalyst for formation of acetaldehyde via the migration of methyl radicals to the coordinated carbonyl in the complex $(CO)Cu^{II}–CH_3^+$ 440
A. Szulc, D. Meyerstein, H. Cohen



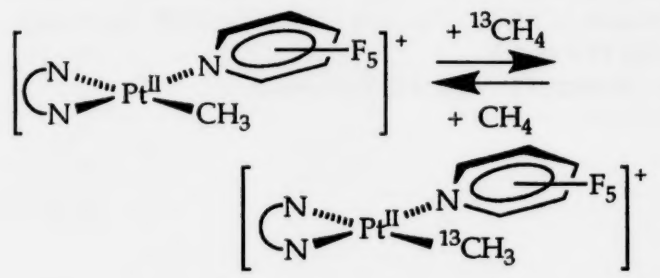
The synthesis of substituted bis[(diarylphosphinomethyl)cyclopentadienyl]zirconocene dichloride complexes for the preparation of heterodimetallic complexes containing early/late transition metal combinations..... 446
B. Bosch, G. Erker, R. Fröhlich



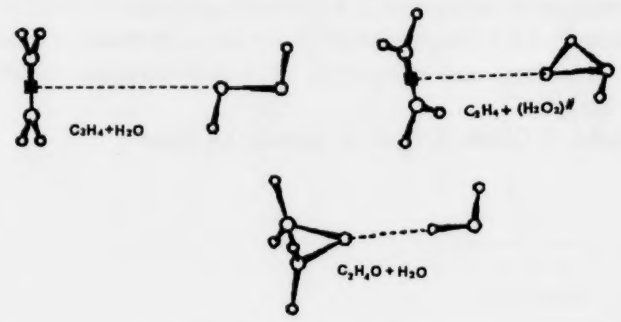
Unique complexation by the tridentate ligands, 6-diphenylphosphino-2-pyridonate (pyphos) and 6-diphenylphosphino-2-pyridone (pyphosH), on ruthenium(II): crystal structures of $(pyphosH)RuCl(\mu\text{-}Cl)Mo_2Cl(pyphos)_3$, $RuCl_2(CO)(pyphosH)_2$, $[Ru(pyphos)_3](\mu\text{-}Na)_2[Ru(pyphos)_3]$ 459
K. Mashima, Y. Kaneda, A. Fukumoto, M. Tanaka, K. Tani, H. Nakano, A. Nakamura



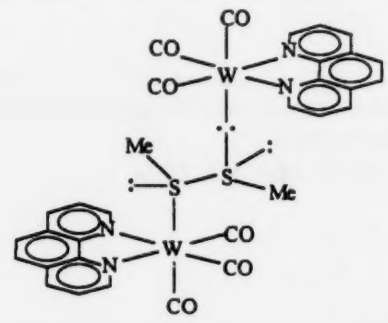
Intramolecular and intermolecular C–H activation at a cationic Pt^{II} center 467
M.W. Holtcamp, L.M. Henling, M.W. Day, J.A. Labinger, J.E. Bercaw



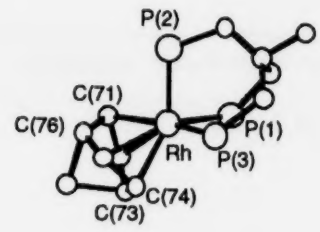
An ab initio MO-LCAO investigation of the electronic structure of organic hydroperoxides and platinum(II) hydroperoxo complexes: a contribution to the knowledge of the mechanism of olefin epoxidation 479
P. Fantucci, S. Lolli, M. Pizzotti, R. Ugo



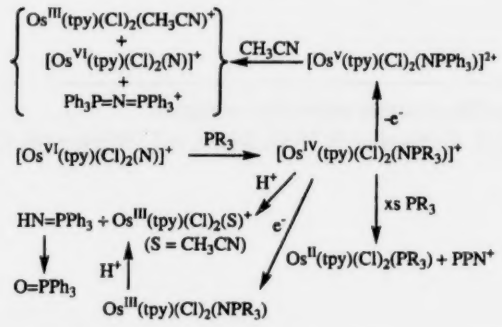
First- and second-order mechanisms for oxidative addition for bound methyl disulfide in the complex $W(CO)_3(phen)(MeSSMe)$ 488
T.D. Ju, K.B. Capps, G.C. Roper, R.F. Lang, C.D. Hoff



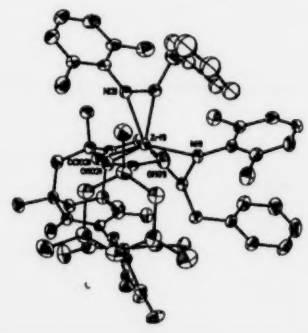
The synthesis of the tripodal phosphine $CH_3C\{CH_2P(m\text{-}CF_3C_6H_4)_2\}_3$ and its rhodium coordination chemistry 499
M. Sülü, L.M. Venanzi, T. Gerfin, V. Gramlich



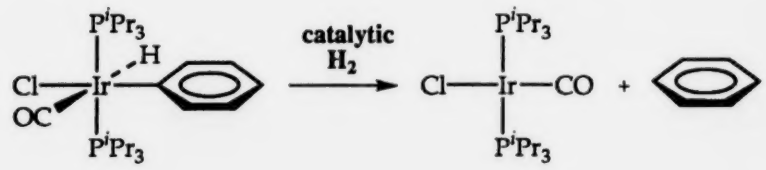
Nitrogen atom transfer and redox chemistry of terpyridyl phosphoraniminato complexes of osmium (IV) 511
K.D. Demadis, M. Bakir, B.G. Klesczewski, D.S. Williams, P.S. White, T.J. Meyer



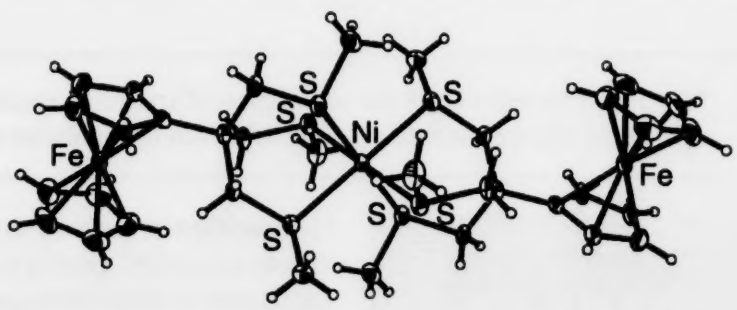
Synthesis, characterization, and reactivity of organometallic Zr(IV) carboxylate complexes 527
D.P. Steinhuebel, P. Fuhrmann, S.J. Lippard



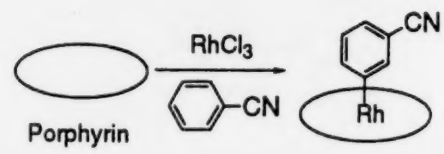
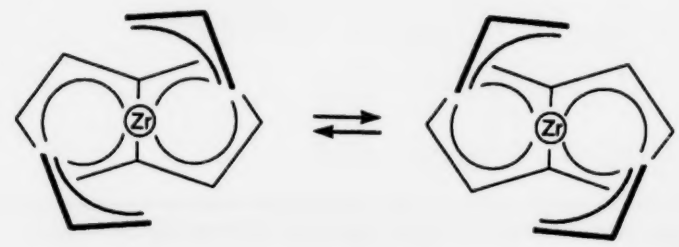
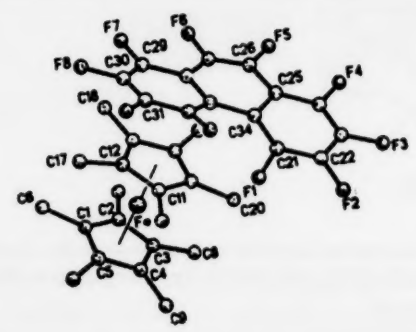
A mechanistic study of thermal C–H reductive elimination from a six-coordinate d^6 iridium complex 537
G.P. Rosini, K. Wang, B. Patel, A.S. Goldman



Ferrocenyl-derived face-capping ligands: syntheses and molecular structures of $[(FcTt)Cu]_4$ and $[FcTt]_2M$ (M = Fe, Co, Ni; $FcTt^-$ = ferrocenyltris((methylthio)methyl)borate) 543
P.J. Schebler, C.G. Riordan, L. Liable-Sands, A.L. Rheingold



Notes

Synthesis of rhodium porphyrin aryls via intermolecular arene carbon–hydrogen bond activation ..... 551 X. Zhou, Q. Li, T.C.W. Mak, K.S. Chan	
Bis(η^3-allyl)(η^8-pentalene)zirconium: preparation, structure and structural dynamics ..... 555 B. Gabor, K. Jonas, R. Mynott	
A ferrocene–perfluoroarene molecular complex ..... 559 C.M. Beck, J. Burdeniuc, R.H. Crabtree, A.L. Rheingold, G.P.A. Yap	

Conference Calendar 563

Author Index of Volume 270 567

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CONTENTS DIRECT

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